

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 493-2 (1981): General Purpose Machinery and Spindle Oils, Part II: Spindle Oils [PCD 3: Petroleum, Lubricants and their Related Products]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrihari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



BLANK PAGE



AMENDMENT NO. 1    NOVEMBER 1983  
TO  
IS:493(Part 2)-1981    SPECIFICATION FOR GENERAL  
PURPOSE MACHINERY AND SPINDLE OILS  
PART 2    SPINDLE OILS

*(First Revision)*

Alteration

[Page 1, Table 1, Sl No.(iv), col 6] - Substitute  
'160' for '180'.

(PCDC 4)

Reprography Unit, ISI, New Delhi, India

*Indian Standard*  
**SPECIFICATION FOR**  
**GENERAL PURPOSE MACHINERY AND SPINDLE OILS**  
**PART II SPINDLE OILS**  
*( First Revision )*

REAFFIRMED

2004

**1. Scope**

1.1 This standard prescribes the requirements and the methods of sampling and test for general purpose spindle oils for various types of non-critical ( total loss ) applications. It does not cover oils compounded with fixed oils or soaps.

1.2 This standard is not intended to cover oils containing additives but such oils are not precluded.

**2. Grade**

2.1 The oils shall conform to one of the 4 viscosity grades as distinguished by the prescribed viscosity limits given in Table 1.

**3. Requirements**

3.1 *General* — The material shall be made from refined mineral oils. It shall be bright, clear and free from water, dirt and other suspended impurities.

3.2 The oils shall also comply with the requirements given in Table 1.

**TABLE 1 REQUIREMENTS FOR GENERAL PURPOSE SPINDLE OILS**

Sl No.	Characteristic	Requirements				Methods of Test, Ref to IS : 1448*
		Extra Light Grade VG 2	Very Light Grade VG 5	Light Grade VG 10	Medium Grade VG 22	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Kinematic viscosity, in centistokes at 40°C	1.98 to 2.42	4.14 to 5.06	9 to 11	19.8 to 24.2	P : 25
ii)	ASTM colour, <i>Max</i>	2.0	2.5	3.0	3.5	P : 12
iii)	Flash point ( Pensky Martens closed-cup ), °C, <i>Min</i>	70	70	—	—	P : 21
iv)	Flash point ( Cleveland open cup ), °C, <i>Min</i>	—	—	144	180	P : 69
v)	Pour point °C, <i>Max</i>	0.0	0.0	0.0	0.0	P : 10
vi)	Ash, percent by mass, <i>Max</i>	0.01	0.01	0.01	0.01	P : 4
vii)	Total acidity, mg KOH/g, <i>Max</i>	0.15	0.15	0.15	0.15	P : 2
viii)	Inorganic acidity	Nil	Nil	Nil	Nil	P : 2
ix)	Saponification value, <i>Max</i>	1.0	1.0	1.0	1.0	P : 55
x)	Copper strip corrosion at 100°C, for 3 h	← Not worse than No. 1 →				P : 15

\* Methods of test for petroleum and its products<sup>1</sup>.

Adopted 28 October 1981

© January 1982, BIS

Gr 1

## **IS : 493 ( Part II ) - 1981**

### **4. Packing and Marking**

**4.1 Packing** — As agreed to between the purchaser and the supplier.

**4.2 Marking** — Following shall be marked on the containers:

- a) Name, grade and net mass of the material;
- b) Manufacturer's name and trade-mark, if any; and
- c) Date of manufacture.

**4.2.1 ISI Certification Marking** — Details available with the Indian Standards Institution.

### **5. Sampling**

**5.1 Representative samples** of the material shall be drawn as prescribed in IS : 1447-1966 ' Methods of sampling of petroleum products '.

**5.2 Number of Tests** — All characteristics given in the specification shall be tested on the composite sample.

**5.3 Criteria for Conformity** — The lot shall be declared as conforming to the requirements of the specification if all the test results on the composite sample meet the relevant specification requirements.

## **EXPLANATORY NOTE**

In this revision requirements for viscosity, colour, pour point, flash point, acidity and saponification value have been modified. Further these grades have been designated according to their viscosity at 40°C as per ISO Viscosity classification ( see IS : 9466-1980 Viscosity classification for industrial liquid lubricants ).